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ABSTRACT

The capacity of the North Central Association Commission on Secondary Schools self-study and team-visit program to effect change in member secondary schools was studied. Change is defined as the rate of implementation of recommendations. As many relevant variables as possible were identified and their interrelationship was investigated. A systems analysis framework was employed to identify and define these variables. They were organized into three categories: recommendation attributes, existing characteristics of schools, and process variables. Data gathered from a representative sample of 57 schools was analyzed. Factor analysis revealed a fourth category of variables, faculty and community attitudes toward and action taken on recommendations. The correlation coefficient achieved (.84) indicated that some of the system of variables related to change as measured by the implementation of recommendations had been determined. The multiple regression equation a allowed an enumeration of the most important variables affecting implementation. The practical implications of this study for the evaluation process are discussed in some detail. (PR)

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ACCREDITATION EVALUATION AND INSTITUTIONAL CHANGE

Paper presented at the Annual Meeting of the American Educational Research Association in Minneapolis, Minnesota, March 5, 1970

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ACCREDITATION EVALUATION AND INSTITUTIONAL CHANGE [1]

The objective of this study was to determine the effectiveness of the required North Central Association self study and team visit program in bringing about change in member secondary schools. Change was defined as the rate of implementation of recommendations. As many variables as possible were identified which are presumed to be related to the implementation of recommendations. The interrelationship of these variables was also investigated.

The Evaluation Process

The North Central Association Commission on Secondary Schools requires each member secondary school to conduct a program of self evaluation every seven years. The self study program involves the appointment of faculty committees which over the course of as much as a year's time evaluate the existing school program and make recommendations for improvements in the future. The culmination of this activity is a visitation of usually three days by a team of "experts" who build on the self evaluation and produce a document which outlines strengths and weaknesses of the school and also makes recommendations for school improvement. [2]

Questions to be Answered

The aim of this study was to determine the total system of variables related to the implementation of recommendations. It was

assumed that change in the member schools, as defined by the percent of implementation of the recommendations, would be the result of many factors.

The test of this assumption required the identification and measurement of all possible variables related to implementation of recommendations. The first key question to be answered, therefore, was, "What variables are related to implementation of recommendations?"

Utilizing a systems analysis framework, the research team members attempted cooperatively to identify and define the related variables.[3] The procedure employed was based on our (1) general knowledge of social systems and change (2) experimental knowledge of the evaluation process, and (3) study of related research on the evaluation process.

It was also possible to logically organize the variables into three categories. These were: (1) recommendation attributes, (2) existing characteristics of the schools, and (3) process variables. "Recommendation attributes" included such items as the cost of implementing a recommendation , and the origin of the recommendation. "Existing characteristics of schools" included the relatively fixed characteristics of the schools over which North Central Association has little or no control, such as per pupil expenditure. "Process variables" included aspects of the evaluation process, such as duration of the self study, as well as attitudes of staff members toward the evaluation process.

With these categories in mind, the second question to be answered was, "Will the relationship between the rate of implementation

of recommendations and given variables within a category persist after accounting for the effects of other categories of variables?" As an example, after analysis of the data it should be possible to say: (1) the evaluation process is most or least effective in bringing about change in schools with certain characteristics, e.g., in schools with high or low per pupil expenditures; (2) the process is most or least effective in schools where the evaluation process embodies certain characteristics, e.g., where the self study took place over a short versus a longer period of time; (3) the percent of implementation of recommendations of a given type was greater than for other types, e.g., costly recommendations were implemented less often than less costly ones, and; (4) after accounting for the effects of one or two categories of variables, a given relationship still holds. For instance, after accounting for the effect of fixed characteristics, such as per pupil expenditure, and after accounting for the effect of attributes of the recommendations, such as cost of implementing the recommendations, process variables, such as duration of the self study, are significantly related to the percent of implementation of recommendations in the schools.

Statement of Hypotheses

Although a number of variables were investigated, two major hypotheses were tested. The variables used may be thought of as sub-hypotheses under each category of the second major hypothesis. The major hypotheses were:

H.1 A model of the system of variables associated with implementation of recommendations can be established and some indication of the relative importance of variables can be determined.

H.2 The implementation of recommendations is related to several variables. When the variables are assigned to categories, the relationship of given variables to implementation will persist independently of the effects of other categories of variables. The categories of variables are:

1. Recommendation attributes
2. Existing characteristics of schools
3. Process variables

The categories into which the variables were placed are not only of importance conceptually. Of equal importance are statistical considerations. If categories of variables, or representative variables for these categories, are to be used as "controls" in partial correlations it is important to know the relationships of these variables and categories. Ideally the categories should be substantially orthogonal. At the same time the variables within the categories should be fairly highly intercorrelated if the category is to be economically represented by some representative variables. To meet these criteria, the variables were factor analyzed to check the content of the categories which had been conceptualized logically.

The total of the variables available for factor analysis resulted from the administration of questionnaires to the faculties of the 57 schools in the sample and from the collection of various

data about these schools. These sources yielded a pool of 186 variables. However, since the number of variables should be less than the number of subjects in factor analysis, only those variables which correlated at .20 or higher with implementation of recommendations were used. This offered a means of selection of the most important variables and reduced the number used to 49.

In general, the factors identified were not in serious discord with the definitions of categories previously established. The factor analysis did result in the realignment of some variables within categories. However, the main result was the addition of another category of variables having to do with faculty and community attitudes toward and actions taken on individual recommendations. These attitudes were clearly different from the generalized attitudes toward the self study or team visit. Temporally, they have to do with events after the self study and team visit were completed. Also, because of the location of these items on the questionnaire they were somewhat suspect of an interpretation of causality. For example, a person having just indicated that a recommendation had been implemented, would be inclined to infer, even if he did not know, that the principal, for instance, had supported the recommendation. For these reasons, and in order to be able to handle this set of variables separately, a new category was established. This fourth category was titled "Attitude Toward and Action on Recommendations."

Procedures

The sample consisted of 57 schools which had conducted the self study about two years prior to this investigation. These schools were as representative as possible of the North Central Association membership. [4]

Because the implementation of recommendations was investigated quite closely, not all of the recommendations made for a school could be investigated. All of the recommendations made for each school were divided into categories of (1) Articulation and Coordination, (2) Curriculum, (3) Facilities, and (4) Personnel. A category of (5) Innovations was also used, though this category was not independent of the first four. Those recommendations selected for investigation were the four most important recommendations from each category, in the judgment of two members of the research team. The percent of implementation of recommendations for each school was defined as those recommendations selected in the first four categories which were either completely or partially implemented.

The data were collected as follows: First, a research team member called on each school in the sample during which he interviewed the principal and other faculty members, examined documentary evidence pertaining to implementation, administered a questionnaire to the superintendent, principal, and 10 teachers, and recorded information from the Evaluative Criteria and the North Central Association Annual Report. Next, other available data regarding schools and states were extracted from several studies which had been conducted previously.

The data were analyzed in two ways using: (1) each recommendation as the unit of analysis, and (2) each school as the unit of analysis. The first analysis utilized chi square tests of significance to compare rates of implementation for various types of recommendations. The second analysis utilized primarily multiple regression. Representative variables were selected for each category of variable through a stepwise multiple regression procedure. These representative variables were used in the equation to determine whether a given relationship of variables persisted independently of the effects of variables in other cateogires. These partial correlations, zero order correlations, and the multiple regression equation were used to determine relationships constituting the total system relating to implementation of recommendations.

Results

With respect to the recommendations selected for each school, when implementation consisted of both complete and partial implementation, the percentages of implementation by categories were: Articulation and Coordination, 61.5 percent; Curriculum, 53.6 percent; Facilities, 41.8 percent; Personnel, 57.8 percent; Total for the above, 53.6 percent; Innovation (not an independent category), 44.6 percent. The mean number of recommendations per category per school was as follows: Articulation and Coordination, 14.5; Curriculum, 52.6; Facilities, 38.0; Personnel, 13.3; Innovations, 1.8; Total 116.5.

The dependent or criterion variable consisted of the percent of selected recommendations implemented in each school. As indicated above, the mean percentage of these recommendations implemented was

53.6. The range of the dependent variable was from 25 to 88, the standard deviation was 15.2, and a probit analysis indicated no departure from normality.

Two multiple regression equations were determined. Both utilized a forward step wise procedure to select the variables in the equation. The first equation was determined using all 49 variables which correlated at .20 or higher with the criterion as the possible independent variables. The second equation was determined using the 12 representative variables as the possible independent variables. In both equations the same five variables were selected first. These five variables explained about 70 percent of the criterion variance (multiple correlation of .84). The predictive model was therefore achieved as stated in the first major hypothesis. [5]

In the analysis by schools, the characteristics of the recommendations for each school were either averaged or percent scores determined as appropriate. Thus the same information was available, by and large, for this analysis and the analysis of recommendations. In only one case did the analysis by recommendations reveal a relationship that was not shown in the analysis by schools. The individual recommendation analysis showed that recommendations which originated with the visiting team were less likely to be implemented than were those which arose previous to the team visit. However, the percent of recommendations which originated with the visiting team when determined for each school failed to correlate significantly with the total percent of implementation for the school. The probable explanation is that this is a real relationship which was masked or

randomized in the school by school analysis.

The second major hypothesis was also borne out. Using the categories established for the variables, representative variables were entered into the equation and partial correlations were determined for the remaining variables, enabling relationships to be established which could be determined to persist even after accounting for the effects of other categories of variables. Findings will be enumerated below. The order of presentation, insofar as possible, follows the order of importance established by the multiple regression equation.

1. Attitude toward and support of individual recommendations on the part of all of the faculty and particularly the principal is very important in the implementation of recommendations. Positive support by some part of the faculty is necessary for implementation. Those recommendations which are not implemented are not often resisted. Instead, it would seem they are not implemented because nobody pushes for them.
2. Teacher and principal attitudes toward and perceptions of the total evaluation process are related to the percent of recommendations implemented. While principals focus on both the team visit and the self study, the teacher attitudes and perceptions concerning the team

visit are more important in relationship to total implementation. Other variables which show a positive relationship to implementation are teacher satisfaction with the self study instrument and teacher perception of the presence of a formal follow-up program.

3. The cost of implementing recommendations is inversely related to the rate of implementation. Those recommendations which cost more will be implemented less often.
4. The kind of school is important in the success of the evaluation process as measured by the implementation of recommendations. There will be greater implementation of recommendations in schools which are less "sophisticated" as indicated by (1) the lack of a professional negotiation agreement with teachers' groups, particularly the AFT, (2) a principal who has fewer semester hours in administration, and (3) a greater percentage of students intending to go to a post secondary school other than college or junior college.
5. There is greater implementation of those recommendations which originated previous to the team visit rather than with the visiting team.

There is also greater implementation of those recommendations which originated with the self study than of those which were is existence previous to the self study.

6. There is greater implementation of recommendations in those schools in which greater importance was attributed to the role of the evaluation process in achieving implementation of those recommendations implemented.

Concluding Remarks

The multiple correlation coefficient achieved (.84) gives indication that some of the system of variables related to change as measured by the implementation of recommendations has been determined. The same statistic indicates that all related variables have not been identified. Future research should be able to identify more related variables. In this study, process variables were not well identified because of the time lag. Research in which the process would be studied as it takes place should be able to better identify these variables.

This study also seems to have practical implications for the evaluation process. Some of these points follow:

The importance of support of recommendations by the faculty in the implementation of recommendations may be noted. If the team

visit is to be effective in bringing about change, the team members should be concerned with support that they can enlist for recommendations and strategies for enlisting this support. Even more important, if a recommendation can be introduced at the level of the self study, it will have greater chances of success. All of this is in line with the concept of the importance of self determination and participation which underlies the whole evaluation process. The average number of innovative recommendations per school (1.8) indicates that the evaluation process has done little to introduce innovations. Rather, it would seem that many recommendations are a sort of bringing-up-to-standards type. If the evaluation process is used in the future as a vehicle to introduce new ideas and methods, the above considerations will become especially important.

The role of the visiting team and the importance of the perception of teachers concerning the visiting team is important. Whether in those schools with higher percentages of implementation the visiting team performed more adequately or the teachers simply had less stringent or more realistic expectations cannot be determined from these data. Very likely both could be true to some extent. It would seem that North Central Association should deal with this important aspect of the evaluation process by: (1) clarifying the role of the visiting team, especially as it concerns the classroom teacher, (2) working toward helping the faculty of the school understand this role and the relative importance of the self study and (3) helping in the selection and training of team members to enable them to do a more adequate job.

The importance of a follow-up program within the school has been indicated; one that gets across to teachers. The responses of principals to the interview also showed that most principals would welcome a follow up small scale visit if this did not include the mandatory implementation of recommendations. The findings here would indicate that such a program should not be restricted to interaction with the administration.

Finally, the finding that the evaluation process has greatest impact on the least sophisticated schools should be a matter of some concern, for the converse of this is that it has least impact on the more sophisticated schools. It may be argued either that the former need more help or that the latter are more impervious to the evaluation process. Probably both statements are true to some extent. Perhaps one factor limiting impact in big city and larger school districts is the lack of any district wide approach which would coordinate the results of the individual school evaluations. While the lack of impact may result in part from a generalized attitude concerning North Central Association, thought should be given to making the evaluation process more meaningful for these more sophisticated schools.

FOOTNOTES

1. This paper is based on the author's unpublished doctoral dissertation, "Accreditation Evaluation and Institutional Change: A study of the Implementation of Recommendations in Selected North Central Association Secondary Schools," Northwestern University, 1969.

2. In the schools studied this process was based on the use of Evaluative Criteria, 1960 Edition, National Study of Secondary School Evaluation (Washington, D.C. 1960), and the High School Evaluation Guide, North Central Association of Colleges and Secondary Schools (Chicago, Illinois, 1965).

3. The research team, consisted of: Gordon Cawelti, Executive Secretary of the North Central Association Secondary School Commission; Larry Master, Indiana University; and Glen Meredith, University of Wisconsin; and the author. The present study was one part of a larger study. Larry Master and Glen Meredith collected some of the data used in the present study and conducted related studies on attitude about the evaluation process and teacher perceptions of changes resulting from the evaluation process.

4. Some of the less populous states were under-represented, as were suburbs and small towns, and the average enrollment of the sample schools was higher than that of member schools. On the other hand, the proportion of schools under 500 enrollment and the proportion of public and non-public schools was the same for the sample and the membership. The distribution and characteristics of the schools in the sample are shown in a table on the next page.

DISTRIBUTION AND CHARACTERISTICS OF SCHOOLS IN THE SAMPLE

State	No.	Area					No. Non-Public	Avg. no. Students
		1	2	3	4	5		
Arkansas	3		3					1002
Illinois	9	3	1	2	1	2	1	1559
Indiana	6	2	3			1	1	1190
Iowa	3		2			1	1	1167
Kansas	3			1	1	1	1	1026
Michigan	5	1	2	1	1			1156
Minnesota	4		1		2	1		672
Missouri	3	1	2					1585
Ohio	6	1	1	2	1	1		1147
Oklahoma	3	1	2					1205
West Virginia	3		1		1	1	1	578
Wisconsin	9	1	4		3	1	1	850
Total	57	10	22	6	10	9	6	1126

Note; Area numbers indicate
1. City over 400,000 residents
2. Community of 5,000-399,000 (not suburban)
3. Suburban - within close proximity to city of over 100,000
4. Small town of under 5,000
5. Rural

5. The equation is shown in the following table:

FINAL MULTIPLE REGRESSION EQUATION WITH TOTAL IMPLEMENTATION OF RECOMMENDATIONS AS CRITERION

Regression Coefficient	Variable	After Each Step R	R^2
151.19	(constant)		
+19.70	Principal's action on recommendations	.569	.324
-12.32	Cost of recommendations	.701	.492
+13.07	Teacher's rating, evaluation process obtains support for needs	.786	.618
+ .46	Percent students intending post secondary school other than college	.816	.666
-5.17	Presence of professional negotiation agreement	.836	.698

The selection of predictor variables which correlate highly with the criterion variable from a number of independent variables is bound to capitalize on chance. If this same equation were employed on a new sample or on the total population, where different or no change factors were operating, the present change inflation of R2 would result in "shrinkage" of R^2 when applied to the new sample.